

Fig 1 lists the Typical Minimum Acceptable Bit Error Rates.

**Bit Error Rate and Error Correction Criteria:**

Typical Minimum Acceptable Bit Error Rate

Video:  $10^{-5}$  *BER*

Audio:  $10^{-3}$  *BER*

Data:  $10^{-10}$  *BER*

**Fig 1**

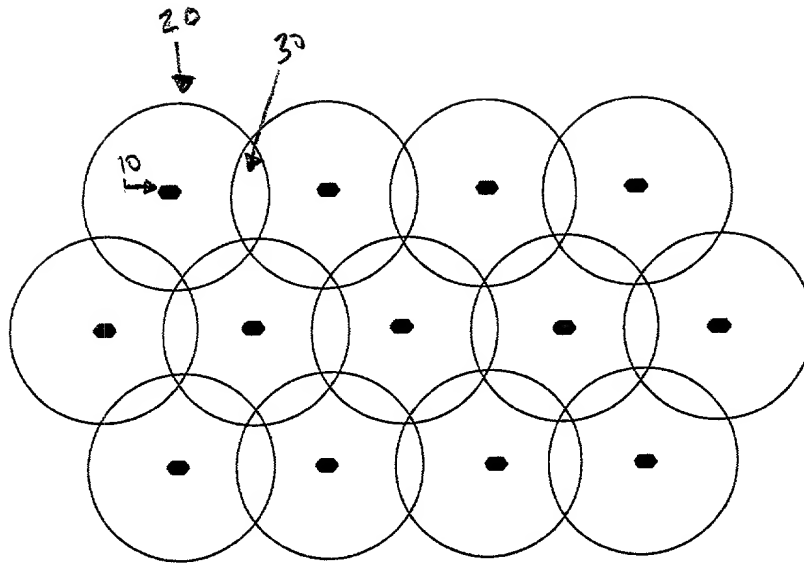


Fig 2 - Base Station Architecture  
(showing overlapping coverage)

FIG. 2 is a diagram of a base station architecture showing overlapping coverage. The diagram shows a 3x4 grid of circles, each containing a small black rectangle. The circles overlap in a hexagonal pattern. Three arrows point to specific elements: '20' points to a circle, '30' points to a rectangle, and '100' points to a rectangle in the top-left circle.

100

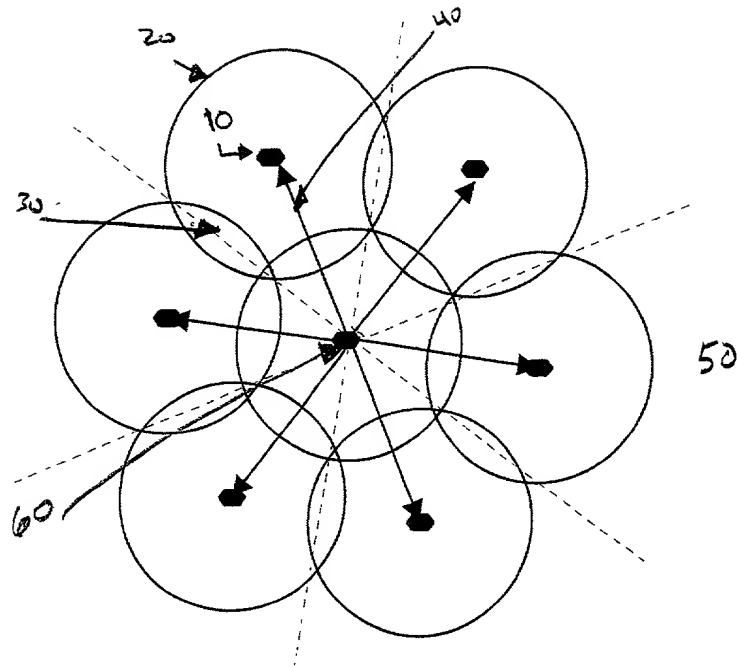


Fig 3 - Single Base Station (showing connectivity to six other Base Stations for handoff and channel co-ordination)

As a Mobile Unit passes from one Sector to another, the Base Station will initiate a "soft handoff" for the channel change

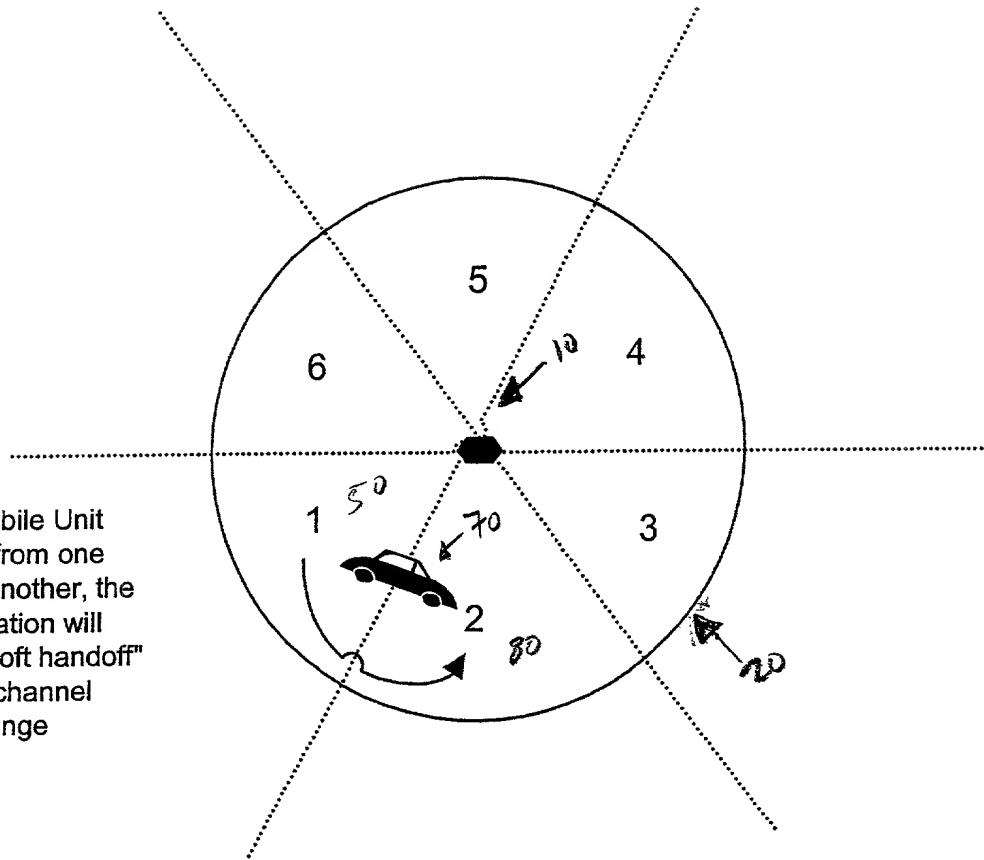


Fig 4 - Sectorization at UWB Base Station

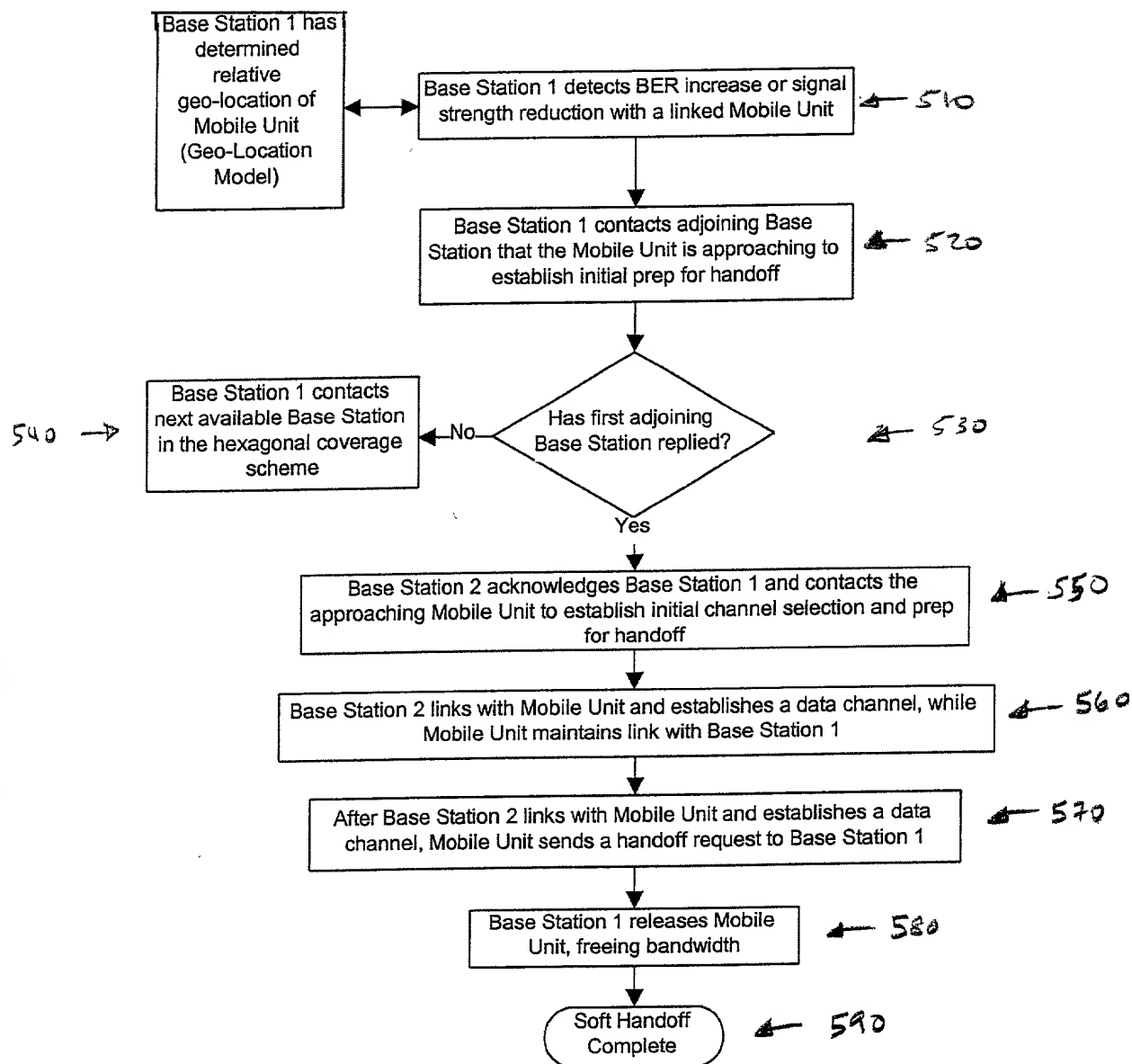


Fig 5 - Soft Handoff Scenario #1: Base Station to New Base Station to Mobile Unit

600

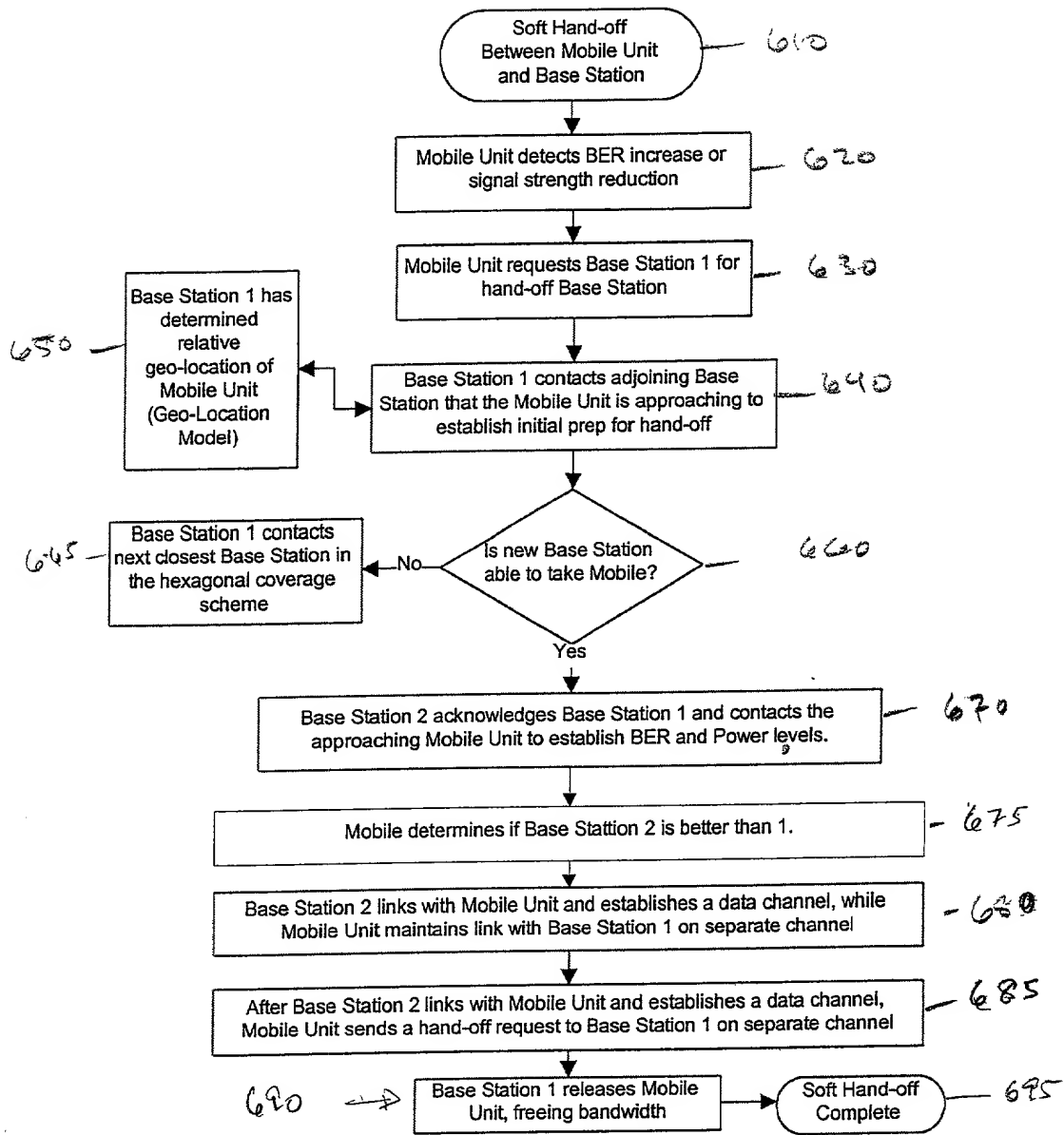


Fig 6 - Soft Hand-off Scenario #2: Mobile Unit to Base Station to New Base Station

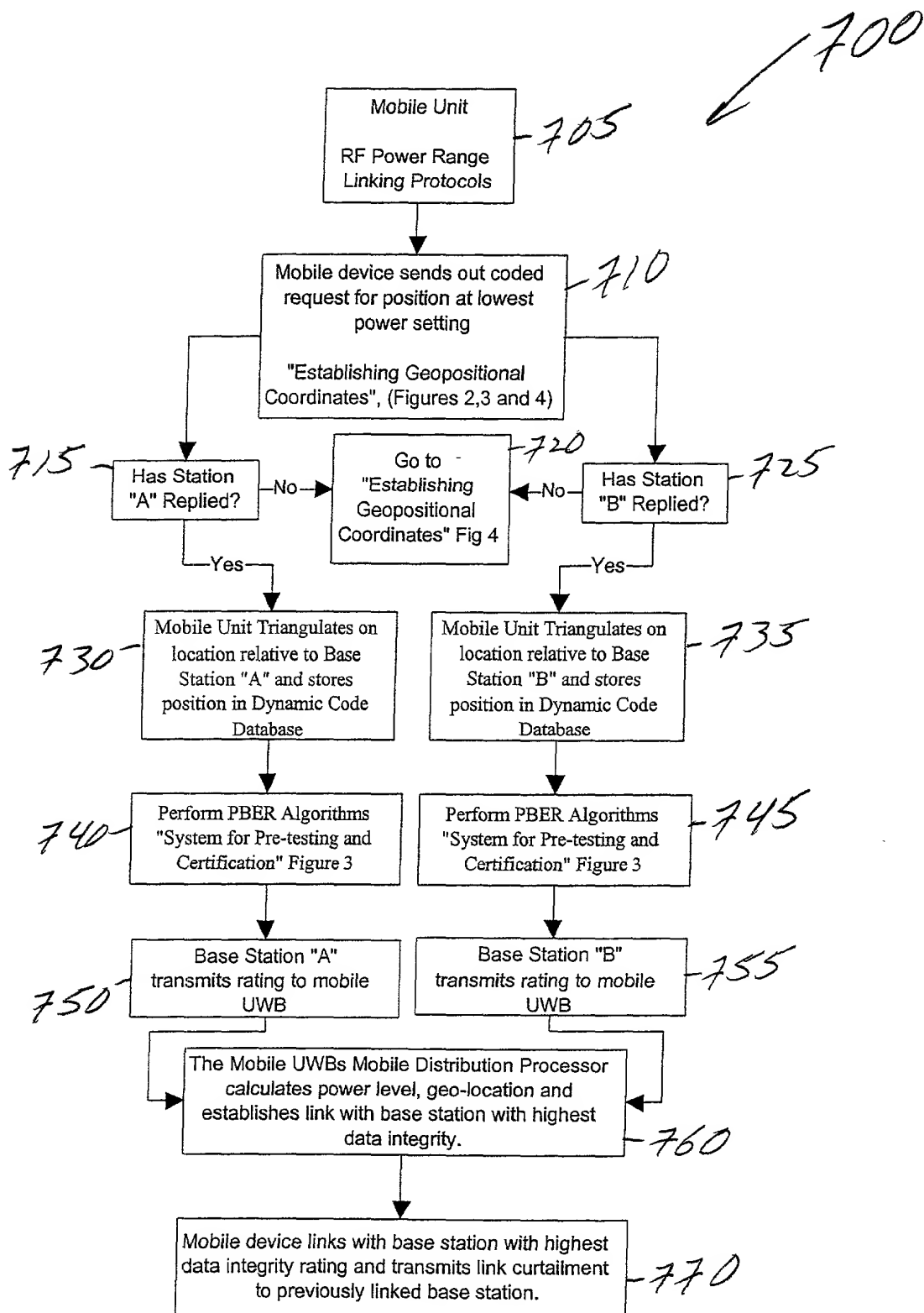
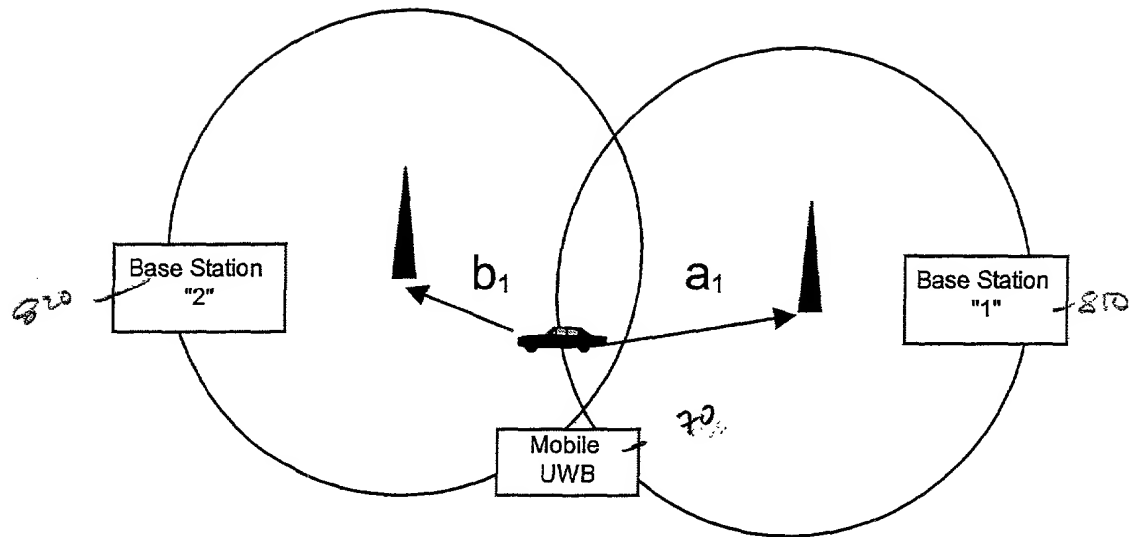


Fig 7 - Soft Hand-off Scenario #3: Performs Dynamic Power Range Linking



Mobile UWB is leaving range of Base Station "1" and is now within the range of Base Station "2"  
 (Transmission distances are indicated by  $a_1$  and  $b_1$ )

Fig 8 - Power-Range Linking Model for soft hand-off  
 (Mobile leaving coverage of Base Station "2")



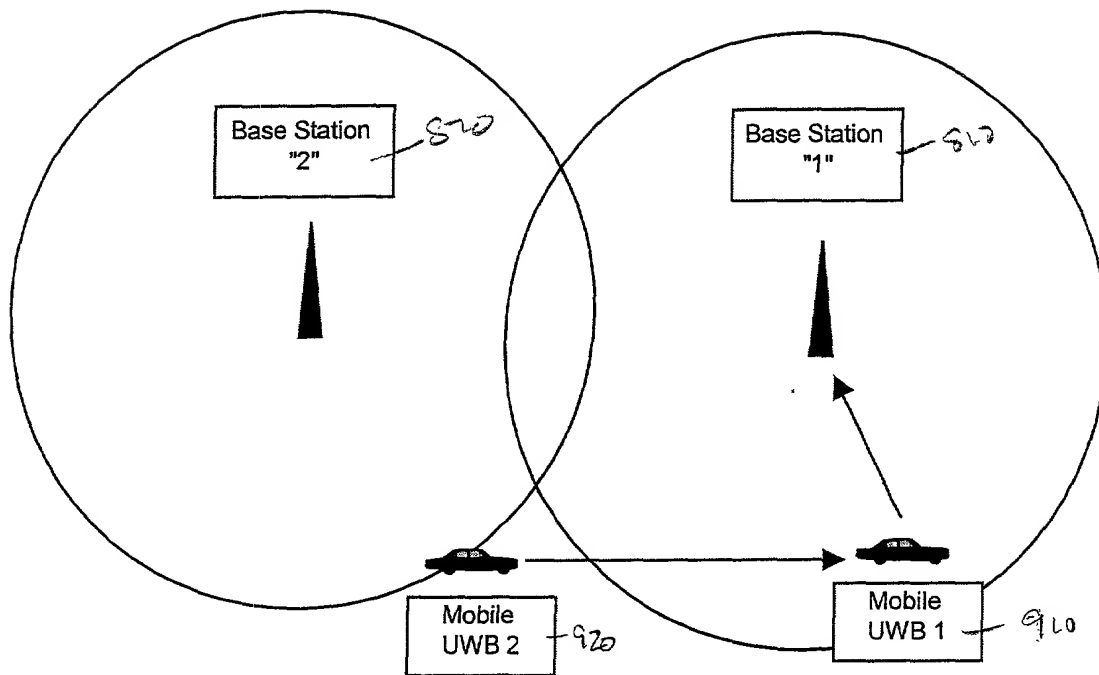


Fig 9 - Soft Hand-off Scenario #4 (Mobile Unit to Mobile Unit to Base Station, also providing emergency geo-locationing)

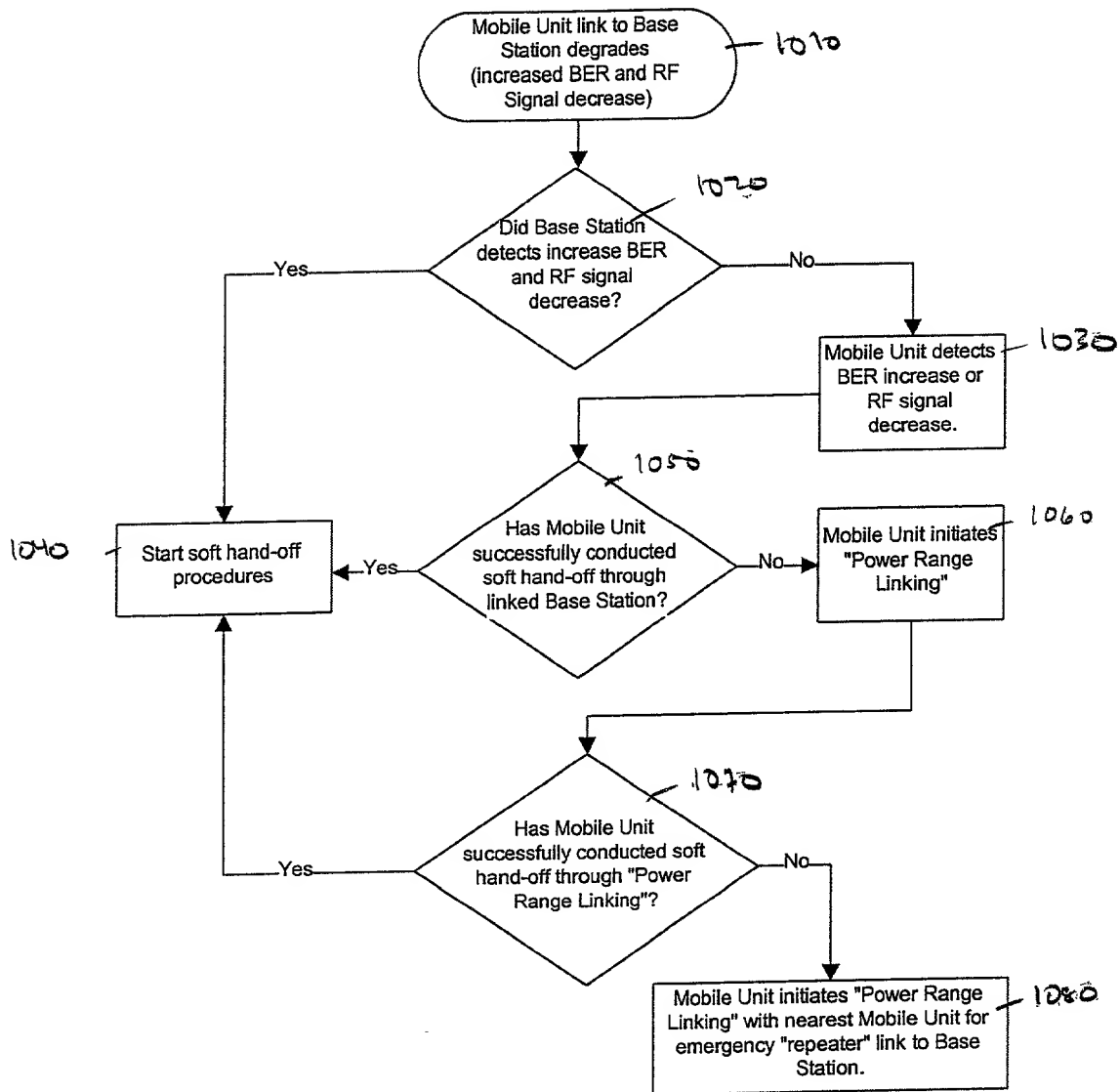


Fig 10 - Soft Hand-off procedures for Scenarios 1 through 4

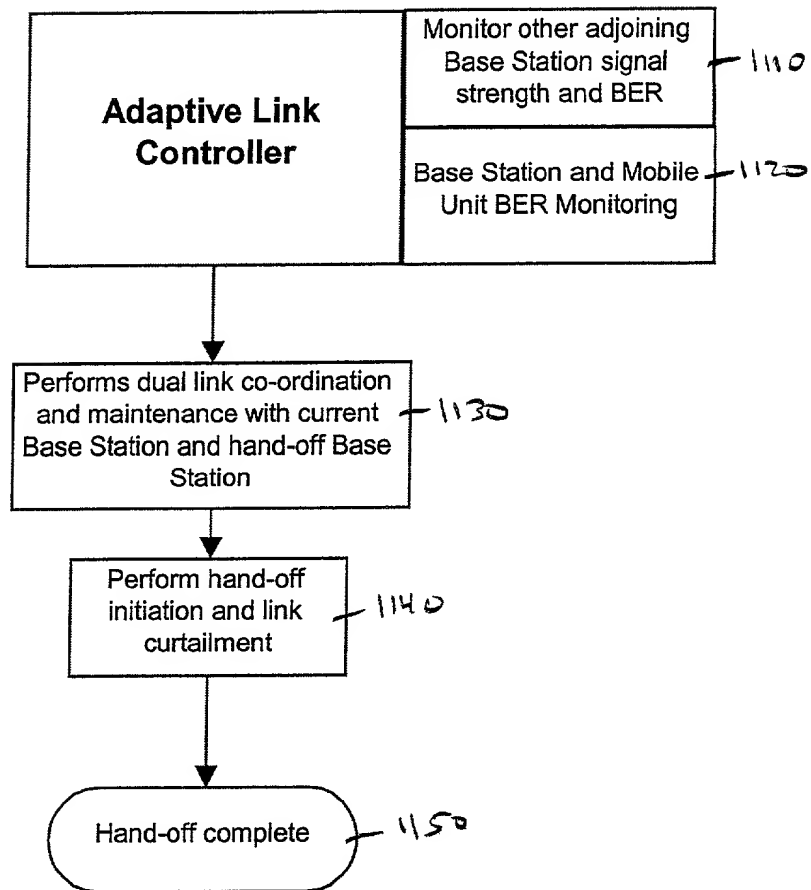


Fig 11 - Adaptive Link Controller